# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/620,684 | 07/16/2003 | Thomas A. Dye | 5757-00201 | 9635 |

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| EXAMINER |
|---|
| RAO, ANAND SHASHIKANT |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2621 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 01/22/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/620,684 | DYE, THOMAS A. |
| | Examiner | Art Unit | |
| | Andy S. Rao | 2621 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.  2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *5/6/04*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

### *Drawings*

1.      The drawings are objected to under 37 CFR 1.83(a) because they fail to show "a feedback signal from element 701 to element 841..." for determination of the "motion rate" as described in the specification on page 15, lines 23-26.  Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).  Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

2.      The specification has not been checked to the extent necessary to determine the presence

of all possible minor errors.  Applicant's cooperation is requested in correcting any errors of

which applicant may become aware in the specification.

### *Claim Rejections - 35 USC § 112*

3.      Claims 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

> A). The preamble of both claims are directed towards a method, but the features of the
>
> claim are elements of a system or apparatus or device, but not steps as would be required
>
> by a method. Since the elements take precedence over the preamble, the Examiner will
>
> treat the claims as an apparatus claim. However, correction is required.

### *Claim Rejections - 35 USC § 102*

4.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

5.      Claims 1, 3-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Aharoni et al.,

(hereinafter referred to as "Aharoni").

Aharoni discloses method for transferring data over a network (Aharoni: figures 11/1, 11/2, 12/1, 12/2, 13-14), the method comprising: a decoder process determining parameters of a network connection, including one or more of current or predicted bandwidth and/or latency (Aharoni: column 17, lines 50-67); providing information regarding the determined parameters to an encoding process (Aharoni: column 13, lines 10-35); the encoding process receiving the information regarding the determined parameters (Aharoni: column 11, lines 30-45; column 18, lines 40-45); the encoding process setting one or more of rank and prioritization (Aharoni: column 9, lines 55-67; column 10, lines 1-5) of independent objects (Aharoni: column 7, lines 45-50) to be compressed by the encoding process based at least in part on the information regarding the determined parameters (Aharoni: column 8, lines 45-50); the encoding process generating and transmitting compressed objects at one or more of varying rates (Aharoni: column 12, lines 40-55) and varying amounts of compression (Aharoni: column 10, lines 40-65) based on said one or more of rank and prioritization of independent objects to be compressed (Aharoni: column 9, lines 55-67), as in claim 1.

Regarding claim 3, Aharoni discloses wherein if the network parameters indicate that network bandwidth has increased and/or transfer latency has decreased, the encoder process generating and transmitting comprises performing at least one of transmitting a greater number of compressed objects and/or (Aharoni: column 14, lines 35-45), or transmitting compressed objects with a reduced amount of compression (Aharoni: column 10, lines 40-65); wherein if the network parameters indicate that network bandwidth has decreased and/or transfer latency has increased (Aharoni: column 14, lines 35-45), the encoder process generating and transmitting comprises performing at least one of transmitting a lesser number of compressed objects

(Aharoni: column 7, lines 45-50) and/or transmitting compressed objects with a greater amount

of compression (Aharoni: column 10, lines 24-34), as in the claim.

Regarding claim 4, Aharoni discloses wherein the decoder process determines parameters

of the network connection based at least one prior transmission of the encoding process to the

decoding process (Aharoni: column 13, lines 35-42), as in the claim.

Regarding claim 5, Aharoni discloses wherein the decoder process determines parameters

of the network connection based at least one prior transmission of each of a plurality of encoding

processes to the decoding process (Aharoni: column 13, lines 30-55), as in the claim.

Regarding claim 6, Aharoni discloses wherein the network is an Internet Protocol (IP)

network (Aharoni: column 6, lines 37-40), as in the claim.

Aharoni discloses a method for performing an encode and decode of video data for

transport over computer networks (Aharoni: figures 11/1, 11/2, 12/1, 12/2, 13-14), the method

comprising: a decoder process determining parameters of a network connection, including one or

more of current or predicted bandwidth and/or latency (Aharoni: column 17, lines 50-67);

providing information regarding the determined parameters to an encoding process (Aharoni:

column 13, lines 10-35); the encoding process receiving the information regarding the

determined parameters (Aharoni: column 11, lines 30-45; column 18, lines 40-45); the encoding

process setting one or more of rank and prioritization (Aharoni: column 9, lines 55-67; column

10, lines 1-5) of independent objects (Aharoni: column 7, lines 45-50) to be compressed by the

encoding process based at least in part on the information regarding the determined parameters

(Aharoni: column 8, lines 45-50); the encoding process generating and transmitting compressed

objects at one or more of varying rates (Aharoni: column 12, lines 40-55) and varying amounts

of compression (Aharoni: column 10, lines 40-65) based on said one or more of rank and prioritization of independent objects to be compressed (Aharoni: column 9, lines 55-67), as in claim 7.

Aharoni discloses a method for performing an encode and decode of video data for transport over computer networks (Aharoni: figures 11/1, 11/2, 12/1, 12/2, 13-14), the method comprising; an input device generating an uncompressed video stream (Aharoni: column 7, lines 5-10), wherein the uncompressed video stream comprises one or more independent video objects (Aharoni: column 7, lines 45-50) comprised of spatial and temporal differences of uncompressed data (Aharoni: column 8, lines 60-65); an encoder compressing the one or more independent video objects to produce one or more compressed video objects (Aharoni: column 8, lines 53-56); the encoder transmitting the one or more compressed video objects to one or more remote receivers across a network (Aharoni: column 11, lines 24-40); the one or more receivers receiving said one or more compressed video objects (Aharoni: column 17, lines 40-50); at least one remote receiver determining parameters of the network based on the transport of previously compressed video objects through the network (Aharoni: column 17, lines 55-67); the at least one remote receiver generating a signal indicative of the parameters of the network (Aharoni: column 13, lines 35-53); the at least one remote receiver transmitting the signal indicative of the parameters of the network to the encoder (Aharoni: column 11, lines 30-45); the encoder dynamically adjusting an output bit rate of newly compressed video objects based on the signal indicative of the parameters of the network (Aharoni: column 12, lines 25-55), as in claim 8.

Regarding claim 9, Aharoni discloses wherein the one or more remote receivers comprise a plurality of remote receivers as specified (Aharoni: column 6, lines 40-45), as in the claim.

### *Claim Rejections - 35 USC § 103*

6.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.      Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aharoni in view of

Ferguson.

Aharoni discloses method for transferring data over a network (Aharoni: figures 11/1, 11/2, 12/1,

12/2, 13-14), the method comprising: a decoder process determining parameters of a network

connection, including one or more of current or predicted bandwidth and/or latency (Aharoni:

column 17, lines 50-67); providing information regarding the determined parameters to an

encoding process (Aharoni: column 13, lines 10-35); the encoding process receiving the

information regarding the determined parameters (Aharoni: column 11, lines 30-45; column 18,

lines 40-45); the encoding process setting one or more of rank and prioritization (Aharoni:

column 9, lines 55-67; column 10, lines 1-5) of independent objects (Aharoni: column 7, lines

45-50) to be compressed by the encoding process based at least in part on the information

regarding the determined parameters (Aharoni: column 8, lines 45-50); the encoding process

generating and transmitting compressed objects at one or more of varying rates (Aharoni:

column 12, lines 40-55) and varying amounts of compression (Aharoni: column 10, lines 40-65)

based on said one or more of rank and prioritization of independent objects to be compressed

(Aharoni: column 9, lines 55-67), as in claim 2. However, Aharoni fails to disclose wherein the

encoding process generates varying amounts of compression utilizing a discrete wavelet transform, as in the claim. Ferguson discloses a method (Ferguson: column 5, lines 1-5) for transferring data over a network (Ferguson: column 1, lines 5-40) by making use of a discrete wavelet transform (Ferguson: column 6, lines 15-20) because of the advantages it offers over the harmonic based discrete cosine transform for video coding such as accurately representing continuous tone images (Ferguson: column 6, lines 33-67; column 7, lines 1-10). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art to incorporate the Ferguson use of a discrete wavelet transform into the Aharoni method in order accurately represent continuous tone images to be coded. The Aharoni method, now incorporating the Ferguson use of a discrete wavelet transform, has all of the feature of claim 2.

## *Conclusion*

8.      The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sekiguchi discloses a method and apparatus for region-based moving image encoding and decoding.

9.      Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

       If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
January 16, 2007

ANDY RAO
PRIMARY EXAMINER